



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/198,018	11/23/1998	THOMAS W. ASTLE	130-125	1987

21091 7590 06/12/2003

JOHN H CROZIER  
1934 HUNTINGTON TURNPIKE  
TRUMBULL, CT 06611

EXAMINER
----------

BEX, PATRICIA K

ART UNIT	PAPER NUMBER
----------	--------------

1743

DATE MAILED: 06/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicati n N .

09/198,018

Examiner

P. Kathryn Bex

Applicant(s)

ASTLE, THOMAS W.

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 19,20 and 24-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18, 21-23 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. In response to the arguments in the Appeal Brief, filed April 3, 2003, the previous rejections under 35 U.S.C. 102(b) and 35 U.S.C. 103(a) have been withdrawn and a new grounds of rejection follows.

#### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 9-13 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 9, recites the removal of the sealing material after adhesion to the carrier tape "by pulling the sealing material from said carrier tape without the use of a knife structure." The instant specification does not exclude the use of a "knife structure". Applicant is reminded that the addition of a negative limitation to carve out subject matter discovered in the prior art violates the description requirement of 35 USC 112 on the basis of lack of enablement and lack of description. The negative limitation recited in claim(s), did not appear in specification or claims as originally filed and therefore introduce new concepts into the disclosure, see *Ex parte Grasselli, et al*, 231 USPQ 393 (BdPatApp&Int 1983). Same deficiency was found in claim 10.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1743

5. Claims 9-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9, last line, recites the use of the word "knife structure." It is unclear what distinguishes a heated "knife" structure from a heated "roll" structure. Moreover, since the specification fails to clarify the subject matter, it is not possible to clearly define the metes and bounds of the invention as claimed. Same deficiency was found in claim 10.

Claim 15, paragraph a) recites "said holes being disposed near upper edges of said chemical receiving wells." The term "near" is a relative term which renders the claim indefinite. The term "near" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It not clear what Applicant considers how "near" the holes are disposed in relation to the upper edges of the chemical receiving wells.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

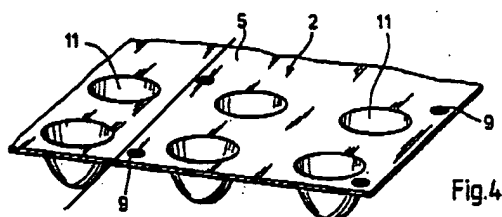
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 6, 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Eigen *et al* (USP 5,447,679).

Eigen *et al* anticipates the instant claims by teaching a method of chemical compound storage comprising providing a transparent carrier tape 36 having two or more matrices of

Art Unit: 1743

thermoformed chemical receiving wells 11 and simultaneously adding to each of the chemical receiving wells a chemical compound via multiple pipette (column 14, lines 3-9). Eigen *et al* clearly teaches the use a thermoplastic material 36 (i.e. polycarbonate) and heat and pressure to form the wells (column 5, line 46- column 7, line 36, Fig. 3). Eigen *et al* teaches a liquid tight sealing material 49 heat sealed to the carrier tape over the chemical receiving wells (column 8, line 6- column 10, line 40, Fig.5). Examiner contends that the tape 36 can be considered as having a plurality of “matrices”, since the wells can be grouped together in an particular manner, as shown by line introduced by the Examiner which separates the tape into a 1 X 2 matrix and a 2X2 matrix, in the the modified Fig. 4 below. Applicant has not required the tape provide any separation means between the matrices.



### *Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1743

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 3-8, 16-18, 23, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eigen *et al* (USP 5,447,679) in view of Anderson (USP 5,092,466).

Eigen *et al* as discussed previously, do not disclose repetitive matrices with a unique identifier. However, such an identifier is considered conventional in the art, see Anderson. Anderson teaches an apparatus and method for storing samples in sealed packets 14 on a carrier strip 32. Additionally, Anderson teaches a die cutting the sealing material around the wells (column 3, lines 5-13) and sprocket holes 20 for indexing the tape using a tractor drive. Anderson also disclose the step of cutting out segment along perforations of the carrier tape with attached sample (column 5, lines 7-22). Moreover, Anderson teaches repetitive matrix with a unique identifier 22, 24 (Fig. 1).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the chemical storage apparatus of Eigen *et al* with the identification means of Anderson, in order to reduce the costs of storage, inventory management, and distribution of a very large number of biological samples (col. 2, lines 17-23).

Regarding the specific material of the carrier tape, it would have been obvious to one of ordinary skill in the art to have made the carrier tape of Eigen *et al* with polypropylene, in order to ensure that the carrier tape is chemically inert with respect to the substances being stored. Since it has been held to be within the general skill of a worker in the art to select a known

Art Unit: 1743

material on the basis of its suitability for the intended use as a matter of obvious design choice.

*In re Leshin*, 125 USPQ 416.

With respect to the number of chemical receiving wells in repetitive matrixes selected from the group consisting of 8 by 12 with a spacing of 9 mm between centers and the specific dimensions of the carrier tape, etc. It would have been an obvious matter of design choice to have made the chemical receiving wells in repetitive matrixes selected from the group consisting of 8 by 12 with a spacing of 9 mm between centers of Anderson in order to increase amount of samples which are assayed. Further, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

11. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Eigen et al* (USP 5,447,679) in view of *Hansen et al* (USP 4,565,783).

*Eigen et al* does not teach the sealing material with a pressure sensitive adhesive to adhere the sealing material to the carrier tape such as to permit removal of the sealing material after adhesion to the carrier tape. *Hansen et al* do teach the sealing material with a pressure sensitive adhesive to adhere the sealing material to the carrier tape such as to permit manual removal of the sealing material after adhesion to the carrier tape without the use of a knife structure (col. 3, lines 58-68, col. 8, lines 24-56). The lower seal layer having a low melting point (polyethylene) and upper high melting point layer (polyester) joined to the seal layer is taught by *Hansen et al* col. 8, lines 24-34. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the chemical storage apparatus

Art Unit: 1743

of Eigen *et al*, the pressure sensitive adhesive as taught by Hansen *et al* in order to prevent contamination of the device during storage and incubation (col. 2, lines 19-22).

12. Claims 9-13, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eigen *et al* (USP 5,447,679) in view of Tidemann *et al* (USP 5,526,935).

Eigen *et al* does teach holes 9 perforating the carrier tape between the chemical receiving wells near the upper edges of the wells (Fig. 1). Eigen *et al* fail to teach the step of evacuating space between the seal material and the carrier tape at the time of sealing. Tidemann *et al* teach a polycarbonate carrier tape 100, 102 comprising a multi-layer sealing material 120 placed in a liquid tight seal to form a well 112. The sealing material made of polyester (column 4, line 12) and having a layer formed of ethyl vinyl acetate (column 6, line 24). Moreover, Tidemann *et al* do teach the use of an aperture 118 to apply a vacuum to the well which evacuates the space between the seal material 120 and the carrier tape 102. (column 5, line 29-30, Fig. 2). Such a step of evacuation allows for more efficient loading of the wells with components (column 5, lines 29-30). Additionally, Tidemann *et al* do teach the sealing material with a pressure sensitive adhesive or heat-sealing means to adhere the sealing material to the carrier tape such as to permit removal of the sealing material after adhesion to the carrier tape.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the method of Eigen *et al* with the step to evacuate the space between the seal material and the carrier tape, as taught by Tidemann *et al* in order to allow for more efficient loading of the wells with components.



Art Unit: 1743

13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eigen *et al* (USP 5,447,679) in view of Paquette (USP 4,159,953).

Eigen *et al* does not teach the step of removing the seal material from the carrier tape by using a heated roll. Paquette does teach a filter plate with bores 28, in which a sealing material 25 is placed over. Additionally, Paquette do teach the step of removing the sealing material via a heated striper means 51 (column 5, lines 42-55, Fig. 3). Such a step of removing the sealing material provides for a readily reusable filter plate immediately following the removal of the seal material. Therefore there is no need to use a new filter plate (column 8, lines 10-23).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the method of Eigen *et al* with the step to remove the seal material from the carrier tape, as taught by Paquette, in order to allow for more economical use of the carrier tape.

***Response to Arguments***

14. Applicant's arguments filed April 03, 2003 have been fully considered but they are not persuasive. In regards to the previous rejection of claims 9-13 under 35 U.S.C. 112, first paragraph, Applicant argues that the specifications only describes pulling the seal from the carrier tape and specifically, the use of a heated roll to facilitate that operation. Therefore, Applicant concludes the absence of a knife structure is inherent in the disclosure. Examiner does not agree since it has been held that the addition of a negative limitation to carve out subject matter discovered in the prior art violates the description requirement of 35 USC 112 on the basis of lack of enablement and lack of description. The negative limitation recited in claim(s), did not appear in specification or claims as originally filed and therefore introduce new concepts into the disclosure, see *Ex parte Grasselli, et al*, 231 USPQ 393 (BdPatApp&Int 1983).

***Conclusion***

15. No claims allowed.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Bex whose telephone number is (703) 306-5697. The examiner can normally be reached on Mondays-Thursdays, alternate Fridays from 6:00 am to 3:30 pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 308-4037.

The fax number for the organization where this application or proceeding is assigned is (703) 872-9310 for official papers prior to mailing of a Final Office Action. For after-Final Office Actions use (703) 872-9311. For unofficial or draft papers use fax number (703) 305-

Art Unit: 1743

7719. Please label all faxes as official or unofficial. The above fax numbers will allow the paper to be forwarded to the examiner in a timely manner.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

*Kathryn Bex*

P. Kathryn Bex  
Patent Examiner  
AU 1743  
June 10, 2003

*Jill Warden*  
Jill Warden  
Supervisory Patent Examiner  
Technology Center 1700